

# Factors Affecting Work Fatigue in Nurses at the Padangsidimpuan Regional General Hospital Emergency Room in 2022

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***Abstract***

*Fatigue is a mechanism to protect the body from further damage resulting in recovery after rest. Fatigue generally shows different conditions for each person, but you lose efficiency and work capacity and decrease body endurance. This study aimed to determine the factors influencing work fatigue in nurses in the Emergency Room at the Padangsidimpuan City Regional General Hospital. This research is a quantitative study with a cross-sectional design. This research was conducted at the Padangsidimpuan Regional General Hospital Emergency Room. This research was conducted from July 2022 to March 2023. The population of this study was all nurses in the Emergency Room at the Padangsidimpuan Regional General Hospital, consisting of 36 nurses. The sampling technique is the total sampling technique. The research sample is 36 nurses. Data analysis in this study used the Spearman Correlation test and the Multiple Linear Regression test. The results of the study are that workload affects work fatigue p-value = 0.0014 (<0.05) r = 0.569, there is an effect of sleep quality on work fatigue p-value = 0.003 (<0.05) r = 0.656, and workload Work affects sleep quality p-value=0.002 (<0.05) r=0.256 in the Emergency Room at the Padangsidimpuan City Regional General Hospital in 2022. It is suggested that the Padangsidimpuan City General Hospital to optimize the distribution system for nurses to make the professional nurses more effective in providing health services in the Emergency Room. The need to make a policy that provides training and career development for nurses based on the competence and performance of nurses to motivate them to work even with a high workload. Moreover, involve nurses in regular training or seminars to improve their abilities and competencies in carrying out their nursing duties.*

***Keywords: Emergency Room, Sleep Quality, Workload, Work Fatigue***

## INTRODUCTION

Work fatigue is a factor in the occurrence of work accidents which causes as many as two million workers to die each year, and as many as 18,828 people (32.8%) of the 58,115 samples experience fatigue at work (ILO, 2018). Work fatigue is a problem that must be prioritized because all workers have the right to health and safety protection and to be treated well and respectfully by human values and religious rules (Undang-Undang Nomor 13 Tahun 2003).

Based on the Law of the Republic of Indonesia Number 38 of 2014 concerning Nursing, nurses are nursing graduates in Indonesia or outside Indonesia approved by the government and in accordance with Laws and Regulations. Nursing is providing care to patients, families,

and communities who are healthy and sick. Nursing services include health services based on nursing knowledge (Presiden Republik Indonesia, 2014).

Data from the Employment Social Security Administration Agency shows that work accidents in Indonesia have increased from 2019 to 2020. The number of work accidents in 2019 was 114,235 cases and increased to 117,161 cases in 2020, while 2020 there were 53 cases of work-related diseases (BPJS Ketenagakerjaan, 2020). Of the number of work accident cases in Indonesia in 2018, out of 847 work accident cases that occurred, 36% were caused by fatigue, while other things caused 64% of other cases, some research shows that the level of worker fatigue is 80% (Martiwi et al., 2017).

Fatigue is a problem that needs attention. All types of formal and informal work lead to job burnout. Work fatigue will reduce performance and increase work errors. Decreasing performance means decreasing work productivity. Suppose a worker's productivity level is disrupted due to physical and psychological fatigue. In that case, the company will feel the resulting consequences in the form of a decrease in company productivity (Mahardika, 2017).

Fatigue occurs due to several factors, namely physical workload, sleep quality, shifts, and work environment. Fatigue has long-term and short-term effects on the health of workers. This occurs when there is much work or an excessive workload, poor sleep quality, or experiences disturbances during sleep hours as experienced by night shift workers (Safe Work Australia, 2013).

Shift work is a factor that affects work fatigue. This is in accordance with research Jannah et al., (2022) and research Sesrianty et al., (2021), which states that there is a relationship between shift work and work fatigue for nurses ($p<0,05$). Research Kondi et al., (2019) state that a relationship exists between workload and nurses' work fatigue ($p=0,001$). Research Kurniawan et al., (2018) gained a value of $p = 0,000$, showing a relationship between workload and work fatigue. Based on research Wijanarti et al., (2022) also stated that there is a relationship between sleep quality and fatigue ($p = 0.001$).

Padangsidimpuan Regional General Hospital is a class B hospital that has 36 nurses. Nurses at the Padangsidimpuan Regional General Hospital have working hours 1 x 24 hours with a division of three work shifts, namely the morning shift (08.00 WIB – 15.00), the afternoon shift (15.00 WIB – 22.00 WIB), and the night shift (22.00 – at 08.00 WIB). The average number of patients in the Emergency Room is 80 people/per day. The number of nurses in the Emergency Room available is 36 nurses. In one day, patients who come to the Emergency Room cannot be ascertained whether they will arrive in the morning, afternoon, or evening. So that sometimes the Emergency Room patients are busy in the morning, sometimes in the

afternoon, and even at night. Meanwhile, there are approximately 12 nurses on duty for one shift. This causes nurses to be overwhelmed in dealing with patients whose number exceeds the number of nurses.

Based on interviews with 7 nurses regarding the workload seen from nursing care and additional assignments, the nurses explained that their activities were too many and very tiring because the additional tasks were obtained outside of the main duties of nurses such as helping doctors, doing administration, cleaning the room when needed. The officers, especially the night shift nurses, did not come to clean the room because the cleaners were no longer available. In addition, because more than one patient came with an emergency or critical condition, nurses were overwhelmed handling patients. The nurses also explained that due to the large number of patients to be treated, the time for rest or worship and lunch had to be alternated by the nurses.

Several nurses mentioned that they experienced fatigue with symptoms of frequent weakness, dizziness, drowsiness, headaches, and yawning while working, as well as irritability and lack of rest because of the large number of patients who came. Monotonous work can cause boredom and fatigue, such as checking pulses, breathing, placing infusions, observing signs of disease, noting patient progress in a report, and other matters.

As for some of the duties of the Emergency Room nurse, namely providing services to patients, receiving patients, when the doctor performs an examination the nurse must be beside the doctor, and provide action according to the doctor's directions, pay attention to the cleanliness of the Emergency Room, facilities that are always available and make it easier for nurses to provide services to patients, record equipment and materials for the Emergency Room for each shift, fulfill administrative requirements to make payments, carry out nursing actions according to doctor's instructions such as anamnesa (medical interviews conducted on patients) and check vital signs first and monitored routinely such as temperature on the body, pulse, respiration and blood pressure, help patients carry out examinations as needed, contact doctors on duty and specialist doctors, contact and accompany inpatients, check the completeness of records and reports of nursing care correctly and correctly, inform other officers to prepare patient needs and refer patients to other health services that are more adequate. Workload causes fatigue, headache, and restlessness in nurses.

Based on the problems described, the author is interested in examining the factors that affect work fatigue in nurses at the Padangsidimpuan Regional General Hospital Emergency Room in 2022.

# METHODS

This type of research is quantitative with correlational observation (non-experimental) and a cross-sectional design. This study aims to determine the factors that influence work fatigue in nurses at the Padangsidimpuan Regional General Hospital Emergency Room in 2022.

The research location is in the Emergency Room at the Padangsidimpuan Regional General Hospital. This research was conducted from July 2022 to March 2023. The population of this study was all nurses in the Emergency Room at the Padangsidimpuan Regional General Hospital, consisting of 36 nurses. The total sampling technique takes the entire population to be used as research objects, namely as many as 36 nurses.

Collecting data in this study, namely 1) Measurement of workload by calculation of Cardiovascular Load (CVL), which calculates the working pulse with the resting pulse using an oximeter. 2) Measure sleep quality with a questionnaire *Pittsburgh Sleep Quality Index* (PSQI) using the interview method. 3) Measurement of work fatigue in this study uses a measuring instrument in the form of *a Reaction Timer*. *A reaction Timer* is a tool to measure workers' response level to a given stimulus. The form of stimulation given is light and sound stimulation.

Data analysis techniques are divided into univariate analysis, bivariate analysis, and multivariate analysis. Univariate analysis to see an overview of the frequency distribution of the variables studied: workload, sleep quality, and work fatigue. Bivariate analysis using the Spearman Correlation test with a significance limit $\alpha$ = 0,05. If p > 0,05 on statistical tests, it shows a relationship between the two variables studied. Moreover, multivariate analysis, namely the Multiple Linear Regression tests using path analysis, determines the relationship pattern between three or more variables.

# RESULTS

The frequency distribution of the characteristics of nurses at the Padangsidimpuan Regional General Hospital Emergency Room in 2022 can be seen in Table 1 below:

**Table 1. Frequency distribution of the characteristics of nurses at the Padangsidimpuan Regional General Hospital Emergency Room**

| Variable | Frequency | % |
|---|---|---|
| **Age (years)** | | |
| 26 – 35 | 17 | 47,2 |
| 36 – 45 | 14 | 38,9 |
| 46 – 55 | 5 | 13,9 |
| 26 – 35 | 17 | 47,2 |
| **Working Period (year)** | | |
| New (≤ 5 years) | 12 | 33,3 |
| Long (> 5 years) | 24 | 66,7 |

Based on Table 1. the results of the study show that the age of the nurses in the Emergency Room at the Padangsidimpuan Regional General Hospital aged 26-35 years was 17 people (47.2%), aged 36-45 years were 14 people (38.9%) and aged 46-55 years as many as 5 people (13.9%). Moreover, from 36 respondents, 12 (33.3%) respondents had a new working period, and 24 (66.7%) had a long working period.

The frequency distribution of work fatigue factors in nurses at the Padangsidimpuan Regional General Hospital Emergency Unit in 2022 can be seen in Table 2 below:

**Table 2. Frequency Distribution of work fatigue factors in nurses at the Padangsidimpuan Regional General Hospital Emergency Unit in 2022**

| Variable | Frequency | % |
|---|---|---|
| **Workload** | | |
| Lightweight | 5 | 13,9 |
| Moderate | 23 | 63,9 |
| Heavy | 8 | 22,2 |
| **Sleep Quality** | | |
| Good | 17 | 47,2 |
| Bad | 19 | 52,8 |
| **Work** | | |
| Mild Fatigue | 3 | 8,3 |
| Moderate Fatigue | 17 | 47,2 |
| Severe Fatigue | 16 | 44,4 |

Based on Table 2. the results showed that the workload on nurses from 36 respondents there were 5 (13.9%) respondents who had light workloads, 23 (63.9%) respondents who had moderate workloads, and 8 (22.2%) respondents who had a heavy workloads. Sleep quality of nurses in the Emergency Room at the Padangsidimpuan Regional General Hospital, out of 36 respondents, 17 (47.2%) respondents had good sleep quality, and 19 (52.8%) respondents had poor sleep quality.

For work fatigue in Emergency Room nurses, out of 36 respondents, there were 3 (8.3%) respondents experiencing mild fatigue, 17 (47.2%) respondents experiencing moderate fatigue, and 16 (44.4%) respondents experiencing severe fatigue.

The effect of workload and sleep quality on work fatigue in nurses at the Padangsidimpuan Regional General Hospital Emergency Room in 2022, which was tested using the Spearman Correlation test, can be seen in table 3 below:

**Table 3. Effect of workload and sleep quality on work fatigue in nurses at the Padangsidimpuan Regional General Hospital Emergency Room in 2022**

| Variable | Work Fatigue | | | | | | | | P-value | r |
|---|---|---|---|---|---|---|---|---|---|---|
| | Lightweight | | Moderate | | Heavy | | Total | | | |
| | n | % | n | % | n | % | n | % | | |
| **Workload** | | | | | | | | | | |
| Lightweight | 3 | 60 | 1 | 20 | 1 | 20 | 5 | 100 | 0,000 | 0,634 |
| Moderate | 0 | 0 | 16 | 69,6 | 7 | 30,4 | 23 | 100 | | |
| Heavy | 0 | 0 | 0 | 0 | 8 | 100 | 8 | 100 | | |
| **Total** | **3** | **8,3** | **17** | **47,2** | **16** | **44,4** | **36** | **100** | | |
| **Sleep Quality** | | | | | | | | | | |
| Good | 3 | 17,6 | 10 | 58,8 | 4 | 23,5 | 17 | 100 | 0,007 | 0,444 |
| Bad | 0 | 0 | 7 | 36,8 | 12 | 63,2 | 19 | 100 | | |
| **Total** | **3** | **8,3** | **17** | **47,2** | **16** | **44,4** | **36** | **100** | | |

Based on Table 3 above, fatigue in respondents with light workload was in the mild fatigue category, namely 3 (60%) respondents, moderate fatigue category, namely 1 (20%) respondents, and severe fatigue category, namely 1 (20%) respondents, while for Respondents with moderate workload were in the category of mild fatigue, namely 0, in the category of moderate fatigue, namely as many as 16 (69.6%) respondents and in the category of severe fatigue, namely as many as 7 (30.4%) of respondents and for respondents with a heavy workload, the category of light fatigue was 0 , the category of moderate fatigue is 0, and the category of severe fatigue is as many as 8 (100%) respondents.

The results of the Spearman test between workload and work fatigue show a value of $p = 0.000$ ($p < 0.05$), indicating a relationship between workload and work fatigue. The correlation coefficient value is 0.634 (strong correlation) and has a positive value (unidirectional), which means that if the load is harder the work, the fatigue will also increase.

Respondents with good sleep quality who experienced mild fatigue were 3 (17.6%) respondents. In comparison, those who experienced moderate fatigue as many as 10 (58.8%) respondents, those who experienced severe fatigue as many as 4 (23.5%), and those with poor sleep quality experienced 0 mild fatigue, moderate fatigue 7 (36.8%) respondents and severe fatigue 12 (63.2%) respondents.

The results of the Spearman test between sleep quality and work fatigue show a value of p = 0.007 (p <0.05), so there is a relationship between sleep quality and work fatigue, and the correlation coefficient value is 0.444 (sufficient correlation), and has a positive value (unidirectional), which means that if the quality If sleep gets worse, work fatigue will also increase.

The Effect of Workload on Sleep Quality for Nurses in the Padangsidimpuan City Regional General Hospital Emergency Room. Test results between workload and sleep quality in Emergency Room nurses who were tested using the Spearman Correlation test can be seen in table 4 below:

**Table 4. The Effect of Workload on Sleep Quality for Nurses in the Emergency Room at the Padangsidimpuan City Regional General Hospital in 2022**

| Workload | Sleep Quality | | | | | | P value | r |
|---|---|---|---|---|---|---|---|---|
| | Good | | Bad | | Total | | | |
| | n | % | n | % | n | % | | |
| Lightweight | 5 | 100 | 0 | 0 | 5 | 100 | 0,002 | 0,503 |
| Moderate | 11 | 47,8 | 12 | 52,2 | 23 | 100 | | |
| Heavy | 1 | 12,5 | 7 | 87,5 | 8 | 100 | | |
| **Total** | **17** | **47,2** | **19** | **52,8** | **36** | **100** | | |

Based on table 4 above, the respondents with a light workload had good quality, namely, 5 (100%) respondents, and those with poor sleep quality, namely 0; respondents with moderate workload who had good sleep quality, namely 11 (47, 8%) and those with poor sleep quality were 12 (52.5%), and respondents with a rather heavy workload who had good sleep quality were 1 (12.5%) respondents and who had poor sleep quality were as many as 7 ( 87.5%) of respondents.

The results of the Spearman test between workload and sleep quality showed a value of p = 0.002 (p <0.05), indicating a relationship between workload and sleep quality. The correlation coefficient value obtained was 0.503 (sufficient correlation) and had a positive value (unidirectional), which means that if the workload work increases, the sleep quality worsens.

**Table 5. Multiple Linear Regression Test Results**

| Variable Influence | R Square | Koefisien e1 | p-value | Koefisien (β) |
|---|---|---|---|---|
| X1 against Y | 0,569 | 0, 569 | 0,014 | 0,375 |
| X2 against Y | | | 0,003 | 0,463 |
| X1 against X2 | 0,256 | - | 0,002 | 0,506 |

Based on Table 5. The results of the regression output in the "Coefficient" section show a significant value of workload of 0.014 (<0.05), meaning that workload affects work fatigue so that Ha1 is accepted while a significant value of sleep quality is 0.003 (<0.05) meaning sleep quality effect on work fatigue so that $Ha_2$ accepted. Nilai $R^2$ value is 0,569, which means that

the contribution of the influence of X1 (Workload) and X2 (Sleep Quality) on Y (Work Fatigue) is equal to 56,9% while for the rest 43,1% is the contribution of other variables not examined. Meanwhile, the value of e1 can be found using the formula $e1=\sqrt{(1-0,569)} = 0, 656$.

Meanwhile, the significant value of variable X1 (workload) to X2 (sleep quality) is 0.002 (<0.05). In conclusion, workload affects sleep quality. Value R square that is 0,256

## DISCUSSION

### Characteristics of Respondents (Age and Years of Service)

The results of the study by interviewing respondents, the characteristics of respondents in the age category according to the Indonesian Ministry of Health (2009), namely early adulthood or aged 26-35 years, namely 17 (47.2%) respondents, while in the late adult category or aged 36-45 years, namely as many as 14 (38.9%) and the last is the early elderly category, namely aged 46-55 years, namely as many as 5 (13.9%) respondents.

The lowest age of the respondent in the study was 26 years, while the highest was 54 years. The most age is at the age of 26-35 years. This age is the best productive because at this age, you can still carry out activities to add to and develop your skills and work experience. However, in this study, respondents aged 35 and under also experienced fatigue at work. This is because physical capacity decreases after the age of 30 years. Generally, muscle complaints begin to be felt at the age of 25-65 years (Tarwaka, 2015b). This is because ability, condition, body capacity, and work productivity decrease with increasing age. Functional, mental and social capacities also decrease. Age affects a person's physical condition, and endurance also begins to decline. Therefore, it is better for elderly workers not to do heavy work because of their declining physical condition.

Based on research Arief Budiman (2016) states that aged >40 years are 2.52 times more at risk of experiencing work burnout than those age <40 years. This is because young people are more capable of doing heavy work, on the other hand, for someone who is old, the ability to do hard work will decrease (Suma’mur, 1989). Age also affects work fatigue. Older workers are prone to decreased muscle strength (Setyawati, 2010).

According to Suma’mur (2013) workers aged 36-45 have gone through a phase where body tissues begin to change, and body strength begins to decline, resulting in fatigue at work. The aging process and decreased ability because the body's organs, cardiovascular system, hormones, and others begin to experience changes.

Respondents' working period in this study was categorized into two, namely the new working period (≤ 5) and the old working period (> 5). Respondents in this study were more

likely to have had a long working period, namely 24 (66.7%) respondents and those who had a new working period 12 (33.3%) respondents. Good work or not can be seen from the work period. Tenure has both positive and negative impacts. The positive impact is that if the working period is longer, the resulting performance will be better because of the experience obtained, while the negative impact is that someone who works for a long time causes fatigue and boredom with the work being done (Mularia, 2019). Someone with a longer working period has the experience and understands more about his daily work than someone who has only worked for a short time (Atiqoh et al., 2014). Work in a standard time of 8 hours/day with 1 hour break without fatigue at work. factors that cause work accidents due to unsafe conditions in the work environment (Sinaga et al., 2022).

**The Effect of Workload on Work Fatigue in Nurses in the Emergency Room at the Padangsidimpuan City Regional General Hospital**

Spearman's test results regarding the effect of workload on nurse fatigue obtained a value of $p = 0.000$ ($p < 0.05$), which means that there is an effect of workload on fatigue. The value of the correlation coefficient (r) is 0.634, which means the level of strength of the relationship is strong.

According to Tarwaka (2015a) activities carried out while working cause workload. The workload is a burden that is obtained through work done. The workload is a factor that affects fatigue according to Safe Work Australia.

This study's results align with research Handayani et al., (2021) that workload is related to work fatigue ($p=0.034$). It was further reported that nurses with excessive workloads are at risk of 1.7 times experiencing work burnout compared to nurses with normal workloads. The results of this study also revealed differences in the risk of work fatigue based on workload because each nurse had different work activities from one another. The activities of nurses at one time are sometimes different because the workload varies greatly and is also influenced by the number of patients who visit.

Research Mulfiyanti (2020) states that there is a significant relationship between workload and work fatigue in nurses at the Tenriawaru Class B Regional General Hospital, Bone Regency, in 2018 (p-value = 0.001). This is because, during the last three months, the Tenriawaru Class B Regional General Hospital in Bone district has experienced an increase in the number of patients, resulting in the nurses' workload increasing every month. The workload nurses receive on duty in the Emergency Room increases when there is an emergency situation for patients, so nurses must concentrate more and act quickly to deal with unstable patient

conditions. This was caused because the heavier the workload of the nurses given, the greater the fatigue experienced by nurses.

Nurses with excessive workloads have 1.7 times the risk of experiencing work burnout compared to nurses with the normal workload. There is a difference in the risk of work fatigue based on workload because each nurse has different work activities from one another (Handayani, 2021). The activities of nurses at one time are sometimes different because the workload varies greatly and is also influenced by the number of patients who visit. This difference in work activity causes differences in physical workload which in turn impacts worker fatigue.

The Emergency Room is a place to provide hospital services in treating patients who are sick, injured, or have other conditions. Quick and responsive in helping patients and according to guaranteed competence and ability to provide initial treatment to patients who come.

In general, the task of the nurse in the Emergency Room at the Padangsidimpuan Regional General Hospital is to serve emergency patients quickly and accurately and work together with the Emergency Room doctor and then receive and examine the patient's condition and then provide assistance and record and provide the results of the observation report to the doctor. Carry out the patient's medical program, carry out treatment measures while taking into account the balance of the patient's needs and assisting the patient's needs while a doctor is examining the patient, then preparing the patient for the ward/polyclinic or referral to another hospital. The Emergency Room Nurse is also tasked with compiling daily reports when changing work shifts. Another nurse must check patients' vital signs, such as blood pressure, pulse, respiratory rate, and body temperature. Nurses are also on duty to install infusions for patients who need them and provide wound care to patients.

The many tasks of the Emergency Room nurses cause fatigue for the Emergency Room nurses, especially during the morning shift. The number of patients who come is more in the morning than the number of patients in the afternoon and evening. This resulted in nurses in the Emergency Room needing more rest. The average number of patients who come to the Emergency Room per day is 80 patients. Some patients need follow-up care and are immediately referred to other hospitals, and some only need ordinary medical care and do not end up in the hospital.

**The Effect of Sleep Quality on Work Fatigue in Nurses at the Emergency Room at the Padangsidimpuan City Regional General Hospital**

Sleep quality is a person's satisfaction when sleeping and not feeling tired, indifferent, easily anxious, tired, blackening around the eyes, swollen eye patch skin, dizziness, frequent yawning and feeling sleepy, and sore eyes (Sugiono et al, 2018). Meanwhile, according to Lanywati in Sugiono et al (2018) the need for sleep is fulfilled if the duration of sleep (sleep quantity) and sleep quality meet the needs. The meaning of sleep quality is the length of time and the quality of sleep itself.

According to Safe Work Australia sleep quality is a factor that affects work fatigue. Sleep quality was measured using the PSQI questionnaire, which consisted of two, namely good $\leq 5$ and bad $> 5$.

The results of the Spearman test between sleep quality and fatigue obtained $p = 0.007$ ($p < 0.05$) so that there was a relationship between sleep quality and work fatigue in Emergency Room nurses, and the correlation coefficient value obtained was 0.444, which means that the correlation level is sufficient and positive or unidirectional. If the quality of sleep worsens, work fatigue will also increase.

This study's results align with research by Wijanarti et al., (2022), which states a relationship between sleep quality and feelings of work fatigue with a value of $p = 0.001$. The higher the sleep disturbance, the higher the fatigue level of the subject. Study Dimkatni et al., (2020) state a significant relationship with the closeness of the weak relationship between sleep quality and work fatigue by having a p-value = 0.002 and a correlation coefficient value = 0.232 with a positive direction.

Research on sleep quality and work fatigue in nurses at the Cibinong Regional General Hospital, shows a relationship between sleep quality and work fatigue, nurses with poor sleep quality results are more at risk of experiencing work fatigue (Rizky et al., 2018). Nurses generally have an irregular work schedule, this work shift causes sleep patterns to change in nurses resulting in a decrease in sleep quality which results in work fatigue. Poor sleep quality can also cause decreased concentration, decreased endurance, and less than-optimal work results. Adequate sleep is needed by nurses to avoid work fatigue (Dimkatni et al., 2020). The longer a person works, the more skilled and experienced he is in dealing with problems at work (Sari et al., 2022).

Based on the study's results, it was found that more respondents with poor sleep quality were more, namely 19 respondents. This is because the majority of nurses are married and have responsibilities as housewives when they are at home. So that when they are at home, the

respondents cannot fully rest properly because they still have household chores to complete, such as taking care of their husbands and taking care of children. The workload at work and household chores cause respondents to have little sleep time because some respondents said that before going to work, respondents have to get up early for dawn prayers at around 05.00 in the morning, then go to the market to shop for groceries and cook for food at home then prepare the children to go to school and take the children to school and then clean the house first before finally going to work at the hospital. Work done at work and at home causes a lack of rest due to work demands and demands at home, so the quality of sleep for the majority of respondents could be better sleep quality.

**The Effect of Workload on Sleep Quality for Nurses in the Emergency Room at the Padangsidimpuan City Regional General Hospital**

Workers who have poor sleep quality or disturbed sleep hours will more easily experience fatigue as experienced by night shift workers because they have little sleep and the body's biology is disrupted (circadian rhythms) due to the work shift. The duration and quality of sleep and the length of time since you first rest can affect your ability to work efficiently, effectively, and safely.

Tarwaka (2014) mentioned that a heavy workload could reduce efficiency and productivity and cause health problems for workers. The physical workload is defined as a heavy burden that can cause cardiovascular increases, making it easier to experience fatigue.

Spearman test results between workload and sleep quality show value $p = 0{,}002$ ($p < 0{,}05$), so there is a relationship between workload and sleep quality of nurses in the Emergency Room. While the value of the correlation coefficient is 0.503, which means that the correlation is sufficient and has a positive value so that the relationship is unidirectional, which means that the higher the workload, the worse the sleep quality.

Research result in Tareluan et al., (2016) This is in line with research which states a relationship between workload and disturbed sleep patterns (p-value=0,006). This is because the heavy workload can make nurses experience stress, experience fatigue and ultimately affect the quality and quantity of their sleep, resulting in disrupted sleep patterns.

The benefits of sleeping with a healthy work schedule, where in his research it was found that adequate sleep after work is very important in recovering from fatigue, so the time interval between shifts must match good sleep time (Takahashi, 2012). Workload affects sleep patterns in nurses. This is evidenced by the addition or increase in the number of patients in the room so that the nurse's performance increases and can also increase the level of fatigue so that which can affect the nurse's sleep pattern (Tareluan et al., 2016).

The workload on the respondent is not only obtained at work, even at home, the respondent still has a job because he is a housewife and a passionate wife to take care of the family. The house should be a place to rest after doing work at work, but in reality, there is still much work to be done at home, such as cooking, taking care of children, cleaning the house, shopping at the market, washing clothes and ironing as well as housework. Other most respondents are married and have children, so apart from having big responsibilities at work, respondents also have the responsibility to take care of their families outside the workplace.

This causes some respondents to have fewer rest hours due to household needs that must be completed before going to work. Several respondents also often experienced waking up during sleep because they wanted to go to the bathroom, body aches, sometimes they were hot at night, and sometimes they felt cold. The poor quality of sleep resulted in respondents often feeling sleepy when working.

## CONCLUSIONS

Based on the results of research that have been done on work fatigue in Emergency Room nurses that out of 36 respondents, there are 3 (8.3%) respondents experienced mild fatigue, 17 (47.2%) respondents experienced moderate fatigue, and 16 (44.4%) respondents experienced severe fatigue. The results showed that workload affected work fatigue p-value=0.0014 (<0.05) r=0.569, there was an effect of sleep quality on work fatigue p-value=0.003 (<0.05) r=0.656 and workload work affects sleep quality p-value = 0.002 (<0.05) r = 0.256 in the Emergency Room at the Padangsidimpuan City Regional General Hospital in 2022.

It is suggested that the Padangsidimpuan City General Hospital to optimize the distribution system for nurses to make the professional nurses more effective in providing health services in the Emergency Room. The need to make a policy that provides training and career development for nurses based on the competence and performance of nurses to motivate them to work even with a high workload. Moreover, involve nurses in regular training or seminars to improve their abilities and competencies in carrying out their nursing duties.

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